

ATTACHMENT 5

A – Tank Bottoms Waste Residuals Data Summary

B – Tank Bottoms Profiles

C – Tank Bottoms Analytical, Test Reports

Carl R. Palmer

2018.10.05 11:07:35
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Summary of Tank Bottom Waste Analysis

Parameter	F037 Listed Constituent	Listing Level	LDR UTS	Units	Sample Number			
					090054592-1	090067188-0	090101989-1	Centrifuged Solids 180724
					F037, F038, K048, K049, K051, K169	F037	F037	F037, F038, K048-K052, K169-K172
D001-Ignitability, flash pt	-	<140 F	DEACT	-	Not Ignitable	Not Ignitable	Not Ignitable	
D002 -Corrosivity, pH	-	<=2 - 12.5=>	DEACT	-	7.7	7.6	8	5.6
D004 - Arsenic	-	5 mg/l	5 mg/l	mg/l	< 0.5	< 0.5	< 0.5	0.27
D005 - Barium	-	100 mg/l	21 mg/l	mg/l	< 5	< 5	< 5	0.15
D006 - Cadmium	-	1 mg/l	0.11 mg/l	mg/l	< 0.1	< 0.1	< 0.1	0.021
D007 - Chromium	-	5 mg/l	0.6 mg/l	mg/l	< 0.5	< 0.5	< 0.5	0.024
D008 - Lead	-	5 mg/l	0.75 mg/l	mg/l	< 0.2	< 0.2	< 0.2	0.03
D009 - Mercury	-	0.2 mg/l	0.025 mg/l	mg/l	< 0.004	< 0.004	< 0.004	0.00013
D010 - Selenium	-	1 mg/l	5.7 mg/l	mg/l	< 0.1	< 0.1	< 0.1	0.0077
D011 - Silver	-	5 mg/l	0.14 mg/l	mg/l	< 0.1	< 0.1	< 0.1	0.001
D018 - Benzene Note 1	F037	0.5 mg/l	10	mg/l	< 0.01	< 0.01	0.0748	0.146
				mg/kg	0.868	1.99	22.1	46
D019 - Carbon tetrachloride	-	0.5 mg/l	6	mg/kg	< 0.2	< 0.1	< 5	< 2.12
D021 - Chlorobenzene	-	100 mg/l	6	mg/kg	< 0.2	< 0.1	< 5	< 2.12
D022 - Chloroform	-	6 mg/l	6	mg/kg	< 0.2	< 0.1	< 5	< 2.12
D023 - o- Cresol	-	200 mg/l	5.6	mg/kg	< 50	< 20	< 200	< 16.2
D024 - m- Cresol	-	200 mg/l	5.6	mg/kg	< 50	< 20	< 200	< 16.2
D025 - p - Cresol	-	200 mg/l	5.6	mg/kg	< 50	< 20	< 200	< 16.2
D026 - Cresols (Total)	-	200 mg/l	11.2	mg/kg	< 100	< 40	< 400	< 32.5
D027 - p-Dichloroethane	-	7.5 mg/l	6	mg/kg	< 0.2	< 0.1	< 5	< 2.12
D028 - 1,2 Dichloroethylene	-	0.5 mg/l	6	mg/kg	< 0.2	< 0.1	< 5	< 2.12
D029 - 1,1 Dichloroethylene	-	0.7 mg/l	6	mg/kg	< 0.2	< 0.1	< 5	< 2.12
D030 - 2,4 Dinitrotoluene	-	0.13 mg/l	140	mg/kg	< 50	< 20	< 200	< 16.2
D032 - Hexachlorobenzene	-	0.13 mg/l	10	mg/kg	< 25	< 10	< 100	< 16.2
D033 - Hexachlorobutadiene	-	0.5 mg/l	5.6	mg/kg	< 50	< 20	< 200	< 16.2
D034 - Hexachloroethane	-	3 mg/l	30	mg/kg	< 50	< 20	< 200	< 16.2
D035 - Methyl Ethyl Ketone	-	200 mg/l	36	mg/kg	< 0.4	< 0.2	< 10	< 53.1
D036 - Nitrobenzene	-	2 mg/l	14	mg/kg	< 50	< 20	< 200	< 16.2
D037 - Pentachlorophenol	-	100 mg/l	7.4	mg/kg	< 25	< 10	< 100	< 32.7
D038 - Pyridine	-	5 mg/l	16	mg/kg	< 50	< 20	< 100	< 32.7
D039 - Tetrachloroethylene	-	0.7 mg/l	6	mg/kg	< 0.2	< 0.1	< 5	< 2.12
D040 - Trichloroethylene	-	0.5 mg/l	6	mg/kg	< 0.2	< 0.1	< 5	< 2.12
D041 - 2,4,5 Trichlorophenol	-	400 mg/l	7.4	mg/kg	< 50	< 20	< 200	< 16.2
D042 - 2,4,6 Trichlorophenol	-	2 mg/l	7.4	mg/kg	< 50	< 20	< 200	< 16.2
D043 - Vinyl Chloride	-	0.2 mg/l	6	mg/kg	< 0.2	< 0.1	< 5	< 2.12
Acenaphthene	F037	-	3.4 mg/kg	mg/kg	< 50	< 20	< 200	65.3
Anthracene	F037	-	3.4 mg/kg	mg/kg	< 50	< 20	< 200	49.9
Benzo (a) anthracene	F037	-	3.4 mg/kg	mg/kg	< 25	< 10	< 100	24.5
Benzo (a) pyrene	F037	-	3.4 mg/kg	mg/kg	< 25	< 10	< 100	9.34
bis (2-ethylhexyl) Phthalate	F037	-	28 mg/kg	mg/kg	< 50	< 20	< 200	5.63
Chrysene	F037	-	3.4 mg/kg	mg/kg	39	10.2	< 100	47.1
Di-n-butyl-phthalate	F037	-	28 mg/kg	mg/kg	< 50	< 20	< 200	< 16.2
Ethylbenzene	F037	-	10 mg/kg	mg/kg	0.689	1.33	58.3	58.0
Fluorene	F037	-	3.4 mg/kg	mg/kg	< 50	< 20	< 200	149
Naphthalene	F037	-	5.6 mg/kg	mg/kg	67.3	< 20	201	471
Phenanthrene	F037	-	5.6 mg/kg	mg/kg	66.7	23.1	213	266
Phenol	F037	-	6.2 mg/kg	mg/kg	< 50	< 20	< 200	21.9
Pyrene	F037	-	8.2 mg/kg	mg/kg	< 50	< 20	< 200	131
Toluene	F037	-	10 mg/kg	mg/kg	5.09	0.789	102	145
Xylenes	F037	-	30 mg/kg	mg/kg	61.7	6.63	342	235
Cyanides	F037	-	590 mg/kg	mg/kg	< 0.05	< 0.05	< 0.05	0.251
Lead	F037	-	N/A	mg/kg	109	135	63	282
Nickel	F037	-	11 mg/l	mg/l	< 1	< 1	< 1	4.2
Carbon Disulfide	-	-	N/A	mg/kg	< 0.4	-	-	< 5.31
2,4-Dimethylphenol	-	-	N/A	mg/kg	< 50	< 20	-	< 32.7
Benzo (g,h,i) perylene	-	-	1.8 mg/kg	mg/kg	< 50	< 20	-	5.63
Dibenz (a,h) anthracene	-	-	8.2 mg/kg	mg/kg	-	-	-	< 3.27
Indeno (1,2,3-cd) pyrene	-	-	3.4 mg/kg	mg/kg	-	-	-	< 3.27
Vanadium	-	-	1.6 mg/l	mg/l	-	-	-	< 0.15
Antimony	-	-	1.15 mg/l	mg/l	-	-	-	< 0.18

Note 1. TCLP Benzene results from TestAmerica Lab Report 490-156147-1

Note 2. All results for Centrifuged Solids 180724 from TestAmerica 490-156147-1 and 560-74858-1

A. CUSTOMER INFORMATION							
1. Generator: [REDACTED]				<input type="checkbox"/> Billing information is same		<input checked="" type="checkbox"/> P.O. required for payment	
2. Facility Address: [REDACTED]				12. Billing Company: [REDACTED]			
3. Mailing Address: [REDACTED]				13. Billing Address: [REDACTED]			
4. City/State/Zip: [REDACTED]				14. City/State/Zip: [REDACTED]			
5. Technical Contact: [REDACTED]				15. Billing Contact: [REDACTED]			
6. Phone: [REDACTED]		7. Fax: () - [REDACTED]		16. Phone: [REDACTED]		17. Fax: [REDACTED]	
8. Generator Status: <input type="checkbox"/> VSQG/CESQG <input type="checkbox"/> SQG <input checked="" type="checkbox"/> LQG				18. Email: [REDACTED]			
9. EPA ID# [REDACTED]				10. State ID# [REDACTED]			
11. NAICS/SIC Codes: 324110							
B. SHIPPING INFORMATION							
1. US DOT Shipping Name: HAZARDOUS WASTE, SOLID, N.O.S.							
2. Hazard Class:		3. UN/NA #: NA3077		4. Packaging Group: PG III		5. RQ:	
6. Container Type: <input checked="" type="checkbox"/> Bulk <input type="checkbox"/> Totes <input type="checkbox"/> Pallet <input type="checkbox"/> Bags <input type="checkbox"/> Drums <input type="checkbox"/> Boxes <input type="checkbox"/> Other, Describe:							
7. Frequency: <input checked="" type="checkbox"/> Year <input type="checkbox"/> QTR <input type="checkbox"/> Month <input type="checkbox"/> 1 Time <input type="checkbox"/> Other Describe?:							
8. Shipment Size: 0 Quantity: 250.00				9. Waste Import: <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete Waste Import Supplement</i>			
C. GENERAL MATERIAL & REGULATORY INFORMATION							
1. Common Name: DEWATERED SLUDGE (REQUIRES TREATMENT)(12% OIL)							
2. Process Generating: LISTED REFINERY WASTES F037, K048/49/51							
3. Describe Physical Appearance: BLACK SLUDGE - DEWATERED							
4. Odor: <input type="checkbox"/> None <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Strong				5. Physical State: <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge/Slurry <input checked="" type="checkbox"/> Solid			
6. Describe Color:				7. Liquid phases: <input type="checkbox"/> Single <input type="checkbox"/> Double Layer <input type="checkbox"/> Multi-layer			
8. Knowledge is from: <input checked="" type="checkbox"/> Lab Analysis <input type="checkbox"/> MSDS				<input checked="" type="checkbox"/> Process/Generator Knowledge			
9. Waste/Material Type (US Ecology Texas customers only): <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Industrial <input type="checkbox"/> Non-Industrial							
10. Restricted under EPA Land Disposal Restrictions (§268):				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
11. If LDR "Yes": <input type="checkbox"/> Wastewater <input checked="" type="checkbox"/> Non-Wastewater <input type="checkbox"/> Debris (§268.2)				12. Alt. Standards for soil? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
13. Is the material RCRA hazardous waste containing benzene and originating at a Petroleum Refinery (SIC 2911), Chemical Manufacturing Plant (SIC 2800 thru 2899) or Coke by-product Recovery Plant (SIC 3312)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes" complete Benzene Waste/Material Operations Supplement Form and Thermal Supplement Form):							
14. VO Conc.(§264.1083): <input checked="" type="checkbox"/> <500 ppmw <input type="checkbox"/> ≥500ppmw				15. Has it been treated after point of generation? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
16. CERCLA Regulated (Superfund) Waste <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				17. Butadiene waste regulated by §63 Subpart XX: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
18. Waste contains UHC constituent(s) (§268.48), above a treatment standard, other than those for which the waste exhibits a characteristic. (If "yes", list all UHC's in Section D): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
19. Waste exempt from definition of "solid waste" or "hazardous waste" (If "Yes", list reference 40CFR): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
20. State Waste Codes		9019409H					
21. RCRA Waste Codes		F037 K048		K049 K051		F038 K169	
22. Source Code: G09		23. Form Code: W409		24. Management Code: H039 (USE only)			

D. COMPOSITION

Values are: ☒ TCLP ☒ TOTALS

Range total ≥ 100%

Constituent	Units	Typical	Min	Max
SOLIDS	%	43	40	50
WATER	%	43	40	50
HYDROCARBONS	%	0.1	0	1
OIL	%	12	10	15
CHRYSENE	PPM		0	15
Di(2-ethylhexyl) phthalate	PPM		0	30
Ethylbenzene	PPM	0.05	0	0.603
Pyrene	PPM		0	8.03
Toluene	PPM	0.05	0	0.219
Nickel	PPM	1	0	2.7
Xylene (mixed isomers)	PPM	0.05	0	0.75

E. CHARACTERISTICS

1. Oxidizer <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	9. Reactive Sulfides ppm <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2. Explosive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	10. Reactive Cyanides ppm <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Organic Peroxide <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11. Water/Air Reactive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4. Shock Sensitive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	12. Thermally Unstable <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Tires <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	13. TSCA Regulated PCB Waste (control sheet required with shipment) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6. Pyrophoric <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	14. Medical/Infectious Waste <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7. Compressed Gases <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Radioactive (If yes, complete Profile Supplement for Radioactive Waste) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8. Halogenated Organics <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
16. Hazardous Secondary Material? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

17. Possibility of incidental liquids from transportation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
18. Is waste/material a solid using the paint filter test? <input type="checkbox"/> Yes (solid) <input checked="" type="checkbox"/> No (not solid)
19. pH (If solid, what is pH if mixed with water?) Range <u>5.00</u> to <u>9.00</u> Typical <u>7.00</u>
20. Flash Point <u>200 °F</u> <input type="checkbox"/> < 140° F
21. Is the waste/material oil bearing from Petroleum Refining, Production or Transportation practices? <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

F. GENERATOR'S CERTIFICATION

☐ Yes ☒ No I certify this waste/material may be disposed of without further treatment.

☐ Yes ☒ N/A I certify this waste/material meets all requirements of legitimate recycling of Hazardous Secondary Materials under 40 CFR 260.43 and/or I am complying with the conditions for generators using the verified recycler exclusion.

I authorize US Ecology to correct inconsistencies on the waste/material profile form that impact waste management decisions with my oral or written authorization. US Ecology will require re-submittal of the waste/material profile information if substantial changes are determined necessary. I understand waste/material that does conform to specifications described in this profile may be rejected by US Ecology unless other contractual arrangements have been agreed to by both parties.

I certify, under penalty of law, that I am familiar with this waste/material stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, that all known or suspected hazards have been disclosed, and that this form was completed in accordance with the instructions provided.

Printed Name	Signature	Title	Date
			1/2/18

D. MATERIAL COMPOSITION CONTINUED			Waste Stream: 090054S92-1	
Values are:	<input checked="" type="checkbox"/> TCLP	<input checked="" type="checkbox"/> TOTALS	Range total ≥ 100%	
Constituent	Units	Typical	Min	Max
Chromium	PPM	0.03	0	0.05
Benzene	PPM	11	0	20
Naphthalene	PPM	5	0	12.3
BENZO(A)PYRENE	PPM	15	0	30



U.S. ECOLOGY TEXAS, INC.

PROFILE # 090054592-1

WASTE/MATERIAL PROFILE FORM

BENZENE WASTE OPERATIONS SUPPLEMENT (BWON 40 CFR Part 61 Subpart FF)

This form must be completed for all hazardous waste/material containing benzene originating at a Petroleum Refinery (SIC 2911), Chemical Manufacturing Plant (SIC 2800 thru 2899) or Coke by-Product Recovery Plant (SIC 3312).

A. GENERATOR INFORMATION

Name of Originating Facility: [REDACTED] EPA Generator #: [REDACTED]

Waste/Material Common Name: DEWATERED SLUDGE (REQUIRES TREATMENT)(12% OIL)

Process generating the waste/material: LISTED REFINERY WASTES F037, K048/49/51

Type of Facility: ☒ Refinery (SIC 2911) ☐ Coke by-products recovery (SIC 3312) ☐ Chemical manufacturing (SIC 2800 thru 2899)Facility Total Annual Benzene Status (TAB): ☐ < 1 Megagram (2,204 lbs) ☐ ≥ 1 but <10 Megagram ☒ ≥ 10 MegagramIs the waste/material being transferred to US Ecology for offsite treatment compliance with 40 CFR Part 61.342(f)? ☐ Yes ☒ No*

By indicating "Yes", notice is provided that the waste/material referenced in this profile is subject to 40 CFR Part 61 Subpart FF (National Emission Standards for Benzene Waste Operations). All shipments under this profile are being transferred to US Ecology for the destruction or removal of benzene in accordance with 40 CFR Part 61.342 (C)(1)(i).

B. CHARACTERISTICS

The flow-weighted annual average benzene content by weight or process turnaround total concentration of this waste/material is: 11 ppmw
(Benzene concentration data must be total concentration by weight. DO NOT USE TCLP CONCENTRATIONS.)The weighted average water content is? ☐ ≤ 10% ☒ > 10%Is this Process Unit Turnaround waste/material? ☐ Yes ☒ No

*Only if you answered "No" for offsite treatment compliance above, please supply the following:

Range of benzene total concentration: 0 to 15 ppmw

This waste/material is classified as: ☐ Process wastewater stream ☐ Product tank drawdown
☐ Landfill leachate ☐ None of the three

C. CERTIFICATION

I certify under penalty of law that I am familiar with the waste/material stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, and that this form was completed in accordance with the instructions provided.

Print Name	Signature	Title	Date
[REDACTED]	[REDACTED]	[REDACTED]	1/2/18



U.S. ECOLOGY TEXAS, INC.

PROFILE # 090054592-1

**WASTE/MATERIAL PROFILE FORM
THERMAL SUPPLEMENT**

This form must be completed for all waste/material processed by US Ecology's Oil Reclamation Facility.

Oil bearing hazardous waste from petroleum refining, production or transportation practices will be recycled to generate a RCRA excluded fuel. Petroleum refining wastes/materials are those generated by processes engaged in producing hydrocarbon products such as gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, etc., through fractionation or straight distillation of crude oil, redistillation of unfinished petroleum derivatives, including cracking, gasification or other processes. This industry also produces aliphatic and aromatic chemicals as by-products. Waste/material generated through petroleum and natural gas production and transportation practices supporting this industry, such as crude petroleum extraction, transportation and bulk storage of petroleum products, natural gas extraction, transmission, distribution and storage will also be recycled to generate a RCRA excluded fuel.

Hazardous Secondary Materials (HSM) having similar chemical properties as petroleum refining wastes will also be recycled. Hazardous wastes not meeting the above criteria will be disposed, with the recovered oil being managed at an offsite RCRA TSDF.

A. GENERATOR INFORMATION			
Name of Originating Facility:			
Name of Generator:		EPA Generator #:	
Waste/Material Stream Name:	DEWATERED SLUDGE (REQUIRES TREATMENT)(12% OIL)		
B. CHARACTERISTICS			
Is the waste/material oil bearing from Petroleum Refining, Production or Transportation practices (see description above)?			<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is the waste/material RCRA excluded Hazardous Secondary Material (HSM)?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
For "characteristics byproducts" that are not excluded petroleum refining OBHW, are the oil constituents fuel themselves?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
The Petroleum Refining listed waste code associated with waste is:			
<input checked="" type="checkbox"/> F037	<input checked="" type="checkbox"/> F038	<input checked="" type="checkbox"/> K048	<input checked="" type="checkbox"/> K049
<input type="checkbox"/> K050	<input checked="" type="checkbox"/> K051	<input type="checkbox"/> K052	<input checked="" type="checkbox"/> K169
<input type="checkbox"/> K170	<input type="checkbox"/> K171	<input type="checkbox"/> K172	<input type="checkbox"/> No Petroleum Refining Listed Waste Code Applies
If no Petroleum Refining Listed Waste Code applies, please provide a detailed description of the process generating the waste/material.			
C. COMPOSITION			
PRIMARY COMPONENTS	TYPICAL % (Should total 100%)	PROPERTIES (wet weight basis)	
Water	43		
Solids (excluding Organics/Oil/TPH)	45		
Organics /Oil/TPH	12		
		PHYSICAL STATE	
		<input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Single Phased <input type="checkbox"/> Multi-Phased	
		Heating Value Btu/Lb	2500
		% of ASH	
Specific Constituents (ppm)		Reclamation Facility Coordination Questions	
Halogens*	0	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Contains Non-Friable Debris Material > 2-inch size? If yes, % vol	
Mercury	0	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Catalyst, does material possess self heating properties?	
SVM (Pb, Cd)	0	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Contains Bitumen / Asphalt / Tar > 1% (wt)? If yes, % vol	
LVM (As, Be, Cr)	0	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Has the material been processed by a centrifuge prior to shipment?	
Organic Chlorine from VOCs	0	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Contains fuel oxygenates? <input type="checkbox"/> MTBE <input type="checkbox"/> Ethanol <input type="checkbox"/> Other ppm	
Sulfides (total)	0	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Does the waste contain any surfactants?	
D. CERTIFICATION			
I certify under penalty of law that I am familiar with the waste/material stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, and that this form was completed in accordance with the instructions provided.			
Printed Name	Signature	Title	Date
			1/2/18

*Halogens: Total Halogens includes Fluorine, Chlorine, Bromine and Iodine. Report weight (ppm) as Halogens.

(effective date 11/01/16)

WASTE / MATERIAL PROFILE FORM

A. CUSTOMER INFORMATION			
1. Generator: [REDACTED]		<input type="checkbox"/> Billing information is same <input checked="" type="checkbox"/> P.O. required for payment	
2. Facility Address: [REDACTED]		12. Billing Company: [REDACTED]	
3. Mailing Address: [REDACTED]		13. Billing Address: [REDACTED]	
4. City/State/Zip: [REDACTED]		14. City/State/Zip: [REDACTED]	
5. Technical Contact: [REDACTED]		15. Billing Contact: [REDACTED]	
6. Phone: [REDACTED]	7. Fax: [REDACTED]	16. Phone: [REDACTED]	17. Fax: [REDACTED]
8. Generator Status: <input type="checkbox"/> VSQG/CESQG <input type="checkbox"/> SQG, <input checked="" type="checkbox"/> LQG		18. Email: [REDACTED]	
9. EPA ID# [REDACTED]		10. State ID# [REDACTED]	
11. NAICS/SIC Codes: 324110			
B. SHIPPING INFORMATION			
1. US DOT Shipping Name: HAZARDOUS WASTE, SOLID, N.O.S.			
2. Hazard Class: 9	3. UN/NA #: NA3077	4. Packaging Group: III	5. RQ: 10.00
6. Container Type: <input checked="" type="checkbox"/> Bulk <input type="checkbox"/> Totes <input type="checkbox"/> Pallet <input type="checkbox"/> Bags <input type="checkbox"/> Drums <input type="checkbox"/> Boxes <input type="checkbox"/> Other, Describe:			
7. Frequency: <input type="checkbox"/> Year <input type="checkbox"/> QTR <input type="checkbox"/> Month <input type="checkbox"/> 1 Time <input checked="" type="checkbox"/> Other Describe?: periodic			
8. Shipment Size: 30 tons		9. Waste Import: <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, complete Waste Import Supplement	
Quantity: 25.00			
C. GENERAL MATERIAL & REGULATORY INFORMATION			
1. Common Name: PRIMARY SLUDGE			
2. Process Generating: REFINERY WASTE WATER TANK CLEANOUT			
3. Describe Physical Appearance: MUDDY OILY SOLIDS			
4. Odor: <input type="checkbox"/> None <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Strong		5. Physical State: <input type="checkbox"/> Liquid <input checked="" type="checkbox"/> Sludge/Slurry <input type="checkbox"/> Solid	
6. Describe Color: VARIES		7. Liquid phases: <input type="checkbox"/> Single <input type="checkbox"/> Double Layer <input type="checkbox"/> Multi-layer	
8. Knowledge is from: <input checked="" type="checkbox"/> Lab Analysis <input type="checkbox"/> MSDS <input checked="" type="checkbox"/> Process/Generator Knowledge			
9. Waste/Material Type (US Ecology Texas customers only): <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Industrial <input type="checkbox"/> Non-Industrial			
10. Restricted under EPA Land Disposal Restrictions (§268): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
11. If LDR "Yes": <input type="checkbox"/> Wastewater <input checked="" type="checkbox"/> Non-Wastewater <input type="checkbox"/> Debris (§268.2)		12. Alt. Standards for soil? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
13. Is the material RCRA hazardous waste containing benzene and originating at a Petroleum Refinery (SIC 2911), Chemical Manufacturing Plant (SIC 2800 thru 2899) or Coke by-product Recovery Plant (SIC 3312)? (If "Yes" complete Benzene Waste/Material Operations Supplement Form and Thermal Supplement Form): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
14. VO Conc. (§264.1083): <input type="checkbox"/> <500 ppmw <input checked="" type="checkbox"/> ≥500ppmw		15. Has it been treated after point of generation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
16. CERCLA Regulated (Superfund) Waste <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		17. Butadiene waste regulated by §63 Subpart XX: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
18. Waste contains UHC constituent(s) (§268.48), above a treatment standard, other than those for which the waste exhibits a characteristic. (If "yes", list all UHC's in Section D): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
19. Waste exempt from definition of "solid waste" or "hazardous waste" (If "Yes", list reference 40CFR <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
20. State Waste Codes		0014695H	
21. RCRA Waste Codes		F037	
22. Source Code: G13		23. Form Code: W609	
		24. Management Code: H039 (USE only)	

D. COMPOSITIONDocuSign Envelope ID: 4639765C-7ED1-4FF3-B71F-931447FD00
Values are: ☐ TCLP ☒ TOTALS

Range total ≥ 100%

Constituent	Units	Typical	Min	Max
OILY SLUDGE AND SOLIDS	%	100	0	0
Ethylbenzene	MG/KG	3.2	0	0
Toluene	MG/KG	1.4	0	0
Xylene (mixed isomers)	MG/KG	57	0	0
Benzene	MG/KG	4.38	0	0
CYANIDE ND <1.76MG/KG			0	0
OIL	%	5	0	0
BENZ(A)ANTHRACENE	MG/KG	71	0	0
BENZO(A)PYRENE	MG/KG	53	0	0
CHRYSENE	MG/KG	140	0	0
Naphthalene	MG/KG	63	0	0

E. CHARACTERISTICS

1. Oxidizer <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	9. Reactive Sulfides ppm <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2. Explosive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	10. Reactive Cyanides ppm <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Organic Peroxide <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11. Water/Air Reactive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4. Shock Sensitive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	12. Thermally Unstable <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Tires <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	13. TSCA Regulated PCB Waste (control sheet required with shipment) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6. Pyrophoric <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	14. Medical/Infectious Waste <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7. Compressed Gases <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Radioactive (If yes, complete Profile Supplement for Radioactive Waste) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8. Halogenated Organics <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
16. Hazardous Secondary Material? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

17. Possibility of incidental liquids from transporation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
18. Is waste/material a solid using the paint filter test? <input checked="" type="checkbox"/> Yes (solid) <input type="checkbox"/> No (not solid)
19. pH (If solid, what is pH if mixed with water?) Range 6.00 to 8.50 Typical
20. Flash Point 212 °F <input type="checkbox"/> < 140° F
21. Is the waste/material oil bearing from Petroleum Refining, Production or Transportation practices? <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

F. GENERATOR'S CERTIFICATION

☐ Yes ☒ No I certify this waste/material may be disposed of without further treatment.

☐ Yes ☒ N/A I certify this waste/material meets all requirements of legitimate recycling of Hazardous Secondary Materials under 40 CFR 260.43 and/or I am complying with the conditions for generators using the verified recycler exclusion.

I authorize US Ecology to correct inconsistencies on the waste/material profile form that impact waste management decisions with my oral or written authorization. US Ecology will require re-submittal of the waste/material profile information if substantial changes are determined necessary. I understand waste/material that does conform to specifications described in this profile may be rejected by US Ecology unless other contractual arrangements have been agreed to by both parties.

I certify, under penalty of law, that I am familiar with this waste/material stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, that all known or suspected hazards have been disclosed, and that this form was completed in accordance with the instructions provided.

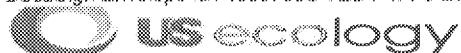
Printed Name	Signature	Title	Date
			1/16/2018

D MATERIAL COMPOSITION CONTINUED
DocuSign Envelope ID: 4639785C-7ED1-4FF3-B71F-931447FD00
Values are: ☐ TCLP ☒ TOTALS

Waste Stream: 090067186-0

Range total ≥ 100%

Constituent	Units	Typical	Min	Max
Phenanthrene	MG/KG	190	0	0
Pyrene	MG/KG	150	0	0
2-METHYLNAPHTHALENE	MG/KG	1200	0	0
TPH C6-C35	MG/KG	120000	0	0
Mercury	MG/KG	0.62	0	0
REACTIVE SULFIDE	MG/KG	50	0	0
2009 ANALYSIS			0	0


WASTE/MATERIAL PROFILE FORM
THERMAL SUPPLEMENT

This form must be completed for all waste/material processed by US Ecology's Oil Reclamation Facility.

Oil bearing hazardous waste from petroleum refining, production or transportation practices will be recycled to generate a RCRA excluded fuel. Petroleum refining wastes/materials are those generated by processes engaged in producing hydrocarbon products such as gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, etc., through fractionation or straight distillation of crude oil, redistillation of unfinished petroleum derivatives, including cracking, gasification or other processes. This industry also produces aliphatic and aromatic chemicals as by-products. Waste/material generated through petroleum and natural gas production and transportation practices supporting this industry, such as crude petroleum extraction, transportation and bulk storage of petroleum products, natural gas extraction, transmission, distribution and storage will also be recycled to generate a RCRA excluded fuel.

Hazardous Secondary Materials (HSM) having similar chemical properties as petroleum refining wastes will also be recycled. Hazardous wastes not meeting the above criteria will be disposed, with the recovered oil being managed at an offsite RCRA TSDF

A. GENERATOR INFORMATION			
Name of Originating Facility:			
Name of Generator:		EPA Generator #:	
Waste/Material Stream Name:	PRIMARY SLUDGE		
B. CHARACTERISTICS			
Is the waste/material oil bearing from Petroleum Refining, Production or Transportation practices (see description above)?			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the waste/material RCRA excluded Hazardous Secondary Material (HSM)?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
For "characteristics byproducts" that are not excluded petroleum refining OBHW, are the oil constituents fuel themselves?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
The Petroleum Refining listed waste code associated with waste is:			
<input checked="" type="checkbox"/> F037	<input type="checkbox"/> F038	<input type="checkbox"/> K048	<input type="checkbox"/> K049
<input type="checkbox"/> K050	<input type="checkbox"/> K051	<input type="checkbox"/> K052	<input type="checkbox"/> K169
<input type="checkbox"/> K170	<input type="checkbox"/> K171	<input type="checkbox"/> K172	<input type="checkbox"/> No Petroleum Refining Listed Waste Code Applies
If no Petroleum Refining Listed Waste Code applies, please provide a detailed description of the process generating the waste/material.			
C. COMPOSITION			
PRIMARY COMPONENTS	TYPICAL % (Should total 100%)	PROPERTIES (wet weight basis)	
Water	50		
Solids (excluding Organics/Oil/TPH)	45		
Organics /Oil/TPH	5		
		PHYSICAL STATE: <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Single Phased <input type="checkbox"/> Multi-Phased	
		Heating Value Btu/Lb: _____ % of ASH: _____	
Specific Constituents (ppm)		Reclamation Facility Coordination Questions	
Halogens*	0	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Contains Non-Friable Debris Material > 2-Inch size? If yes, _____ % vol	
Mercury	0	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Catalyst, does material possess self heating properties?	
SVM (Pb, Cd)	0	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Contains Bitumen / Asphalt / Tar > 1% (wt.)? If yes, _____ % vol	
LVM (As, Be, Cr)	0	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Has the material been processed by a centrifuge prior to shipment?	
Organic Chlorine from VOCs	0	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Contains fuel oxygenates? <input type="checkbox"/> MTBE <input type="checkbox"/> Ethanol <input type="checkbox"/> Other _____ ppm	
Sulfides (total)	0	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Does the waste contain any surfactants?	
D. CERTIFICATION			
I certify under penalty of law that I am familiar with the waste/material stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, and that this form was completed in accordance with the instructions provided.			
Printed Name	Signature	Title	Date
			01/16/2018



U.S. ECOLOGY TEXAS, INC.

PROFILE # 090067188-0

WASTE/MATERIAL PROFILE FORM**BENZENE WASTE OPERATIONS SUPPLEMENT (BWON 40 CFR Part 61 Subpart FF)**

This form must be completed for all hazardous waste/material containing benzene originating at a Petroleum Refinery (SIC 2911), Chemical Manufacturing Plant (SIC 2800 thru 2899) or Coke by-Product Recovery Plant (SIC 3312).

A. GENERATOR INFORMATION

Name of Originating Facility: [REDACTED]

EPA Generator #: [REDACTED]

Waste/Material Common Name: PRIMARY SLUDGE

Process generating the waste/material: REFINERY WASTE WATER TANK CLEANOUT

Type of Facility: ☒ Refinery (SIC 2911) ☐ Coke by-products recovery (SIC 3312) ☐ Chemical manufacturing (SIC 2800 thru 2899)

Facility Total Annual Benzene Status (TAB): ☐ < 1 Megagram (2,204 lbs) ☐ ≥1 but <10 Megagram ☒ ≥10 Megagram

Is the waste/material being transferred to US Ecology for offsite treatment compliance with 40 CFR Part 61.342(f)? ☒ Yes ☐ No*

By indicating "Yes", notice is provided that the waste/material referenced in this profile is subject to 40 CFR Part 61 Subpart FF (National Emission Standards for Benzene Waste Operations). All shipments under this profile are being transferred to US Ecology for the destruction or removal of benzene in accordance with 40 CFR Part 61.342 (C)(1)(i).

B. CHARACTERISTICS

The flow-weighted annual average benzene content by weight or process turnaround total concentration of this waste/material is: 4.35 ppmw
(Benzene concentration data must be total concentration by weight. DO NOT USE TCLP CONCENTRATIONS.)

The weighted average water content is? ☒ ≤10% ☐ >10%

Is this Process Unit Turnaround waste/material? ☐ Yes ☒ No

*Only if you answered "No" for offsite treatment compliance above, please supply the following:

Range of benzene total concentration: _____ to _____ ppmw

This waste/material is classified as: ☐ Process wastewater stream ☐ Product tank drawdown
☐ Landfill leachate ☐ None of the three

C. CERTIFICATION

I certify under penalty of law that I am familiar with the waste/material stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, and that this form was completed in accordance with the instructions provided.

Print Name	Signature	Title	Date
[REDACTED]	[REDACTED]	[REDACTED]	1/16/2018